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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/412,512 10/05/99 YAMAZAKI

S 0756-2046

EXAMINER

022204
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SUITE 800
MCLEAN VA 22102

MM91/0417

BOOTH, R	
ART UNIT	PAPER NUMBER

2812
DATE MAILED:

04/17/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<p align="center">Office Action Summary</p>	Application No. 09/412,512	Applicant(s) YAMAZAKI, SHUNPEI	
	Examiner Richard A. Booth	Art Unit 2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 14-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- | | |
|---|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5,6,8</u> . | 20) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 14 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Zhang, U.S. Patent 5,236,850 (see abstract).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al., U.S. Patent 5,147,826 in view of Zhang, U.S. Patent 5,236,850.

Liu et al. shows the invention substantially as claimed including forming an amorphous silicon film on a glass substrate; forming a discontinuous metal layer such as palladium or nickel thereover; and crystallizing said amorphous silicon film (see abstract), wherein the metal layer can be formed selectively using a shadow mask (see column 6, lines 1-5).

Liu et al. lacks anticipation of forming the amorphous silicon film through sputtering.

Zhang discloses forming a semiconductor film by sputtering followed by subsequent crystallization (see abstract). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the semiconductor film in the primary reference of Liu et al. by sputtering because of the reasons elaborated upon by Zhang at column 1, lines 28-34.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al., U.S. Patent 5,773,227 in view of Zhang, U.S. Patent 5,236,850.

Yamazaki et al. shows the invention substantially as claimed including adding a catalytic element to promote crystallization and subsequent to crystallization removing said element from the semiconductor film (see column 2, lines 5-57).

Yamazaki et al. lacks anticipation of forming the semiconductor film through sputtering.

Zhang discloses forming a semiconductor film by sputtering followed by subsequent crystallization (see abstract). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the semiconductor film in the primary reference of Liu et al. by sputtering because of the reasons elaborated upon by Zhang at column 1, lines 28-34.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki in view of Zhang as applied to claim 16 above, and further in view of Fonash et al., U.S. Patent 5,275,851.

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Yamazaki and Zhang are applied as above but lack anticipation of forming the crystallization promoting metal in the insulating surface.

Fonash discloses a methodology whereby the metal element which promotes crystallization is formed as a layer 12 on the glass substrate (see Figure 1 and column 3, lines 15-41). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form a metal layer on the glass substrate in the primary reference of Yamazaki because the method of Fonash provides an improved process for selective crystallization.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard A. Booth whose telephone number is 308-3446. The examiner can normally be reached on Monday to Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling can be reached on 308-3325. The fax phone numbers for the organization where this application or proceeding is assigned are 308-7724 for regular communications and 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1782.



Richard A. Booth
Art Unit 2812